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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,288	08/31/2004	Thomas Justel	DE 020051	6742
24737	7590	10/31/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			ROY, SIKHA	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/506,288	Applicant(s) JUSTEL ET AL.	
	Examiner Sikha Roy	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>0804</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

As provided in 37 CFR 1.77(b) the specification should include following sections, each one with proper section headings such as 'Title of the Invention', 'Background of the Invention', 'Summary of the Invention', 'Brief Description of Drawing', 'Detailed Description of the Invention', 'Claims' and 'Abstract'.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,983,881 to Eliasson et al., and further in view of U.S. Patent 4,499,159 to Brines et al.

Regarding claim 1 Eliasson discloses (Fig. 1 column 3 lines 7-17, column 4 lines 1-30) a device for generating ultraviolet radiation equipped with at least partially UV-transparent discharge vessel of quartz or sapphire whose discharge space 4 is filled

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with a gas filling, with means for triggering and maintaining excimer discharge and with a luminous coating 5.

Eliasson is silent about the coating containing phosphor comprising a host lattice and neodymium activator.

Brines in same field of endeavor discloses (column 2 lines 5-35) phosphor comprising a host lattice (rare-earth oxyhalide phosphors) having neodymium as activator. Brines further discloses partial substitution with neodymium in the host lattice result in more uniform scintillation intensities with the absorbed radiation being more uniformly converted to light at reduced quantum noise levels.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use phosphor having neodymium as activator as suggested by Brines for the luminescent material of Eliasson for providing more uniform scintillation intensities with the absorbed radiation being more uniformly converted to light at reduced quantum noise levels.

Regarding claim 2 Brines discloses the phosphor containing praseodymium as co-activator.

Regarding claim 5 Eliasson discloses (column 3 lines 24-48) the gas filling contains a gas selected from xenon, argon neon and helium.

Regarding claim 6 Eliasson discloses the filling gas contains xenon.

Regarding claim 7 Eliasson discloses (column 4 lines 27-30) the discharge vessel has electrodes composed of UV-reflecting material such as aluminum .

Regarding claim 8 Eliasson discloses the vessel contains UV-reflecting coating 8 that reflects UV light.

Regarding claim 9 the recitation of using for photolytic processes has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,983,881 to Eliasson et al., U.S. Patent 4,499,159 to Brines et al. and further in view of U.S. Patent Application Publication 2002/0195922 to Juestel et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the

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application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claim 3 Eliasson and Brines do not exemplify the phosphor selected from the group $(La_{1-x}Y_x)PO_4:Nd$ where $0 \leq x \leq 1$, $(La_{1-x}Y_x)PO_4:Nd,Pr$ where $0 \leq x \leq 1$, $SrAl_{12}O_{19}:Nd$, $LaB_3O_6:Nd$, $LaMgB_5O_{10}:Nd$, $SrAl_{12}O_{19}:Nd,Pr$, $LaBO_3O_6:Nd,Pr$, $LaMgB_5O_{10}:Nd,Pr$ and $GdPO_4:Nd$.

Juestel in same field of endeavor discloses (para [0028]- [0036]) use of phosphor $(La_{1-x}Y_x)PO_4:Nd$ in a gas discharge vessel. Juestel further discloses these phosphors have very large absorption coefficient in the ultraviolet range and have high quantum yield for the wavelengths in the xenon radiation range.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the phosphor of Eliasson and Brines by the phosphor $(La_{1-x}Y_x)PO_4:Nd$ as suggested by Juestel for providing high quantum yield for the wavelengths in the xenon radiation range.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 4,983,881 to Eliasson et al., U.S. Patent 4,499,159 to Brines et al. and further in view of U.S. Patent 5,998,047 to Bechtel et al.

Regarding claim 4 Eliasson and Brines are silent about the phosphor having coating that contains oxide selected from the group MgO , SiO_2 , and Al_2O_3 .

Bechtel in analogous art of UV-phosphor discloses (column 5 lines 15-20) a coating of SiO₂ on the phosphor which enables the viscosity of the powder to be increased.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the UV phosphor of Eliasson and Brines having a coating of SiO₂ as taught by Bechtel for increasing the viscosity of the luminescent material on the discharge vessel.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,398,970 to Justel et al. discloses phosphor emitting in the UV-C range having Pr activator. EP 1541659 A1 to Takeda et al. discloses phosphor with Nd, Pr as activator providing high luminance when excited by vacuum ultraviolet radiation. U.S. Patent 6,193,894 to Hollander discloses UV radiation source for sterilizing and/or disinfecting water.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sikha Roy

Sikha Roy
Patent Examiner
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